

Claims

1. An apparatus for detecting pressure from a pressurised volume, **characterized** in that the apparatus comprises a resilient element, a piston comprising a first end being in direct connection with the said volume, and a second end
5 being in connection with the resilient element, and a circuit having interfaces outside the apparatus,

in which apparatus the resilient element allows movement of the piston when a sufficient pressure is acting on the first end of the piston while the location of the second end depends on the movement of the piston, and in a
10 certain location the piston forming a mechanical connection thereby closing the circuit, which can be detected from the interfaces.

2. An apparatus according to claim 1, **characterized** in that the resilient element is a spring or the like.

3. An apparatus according to claim 1 or 2, **characterized** in that the circuit
15 comprises a first part including a first conductor, and a second part including a second conductor.

4. An apparatus according to claim 1, 2 or 3, **characterized** in that the apparatus comprises a movement restrictor stopping the movement of the piston towards the resilient element at a certain location spot.

20 5. An apparatus according to claim 4 and 3, **characterized** in that the apparatus comprises an upper support of the resilient element for supporting the upper end of the resilient element, a lower support of the resilient element for supporting the lower end of the resilient element and an intermediate part being in connection with the upper support of the spring,

25 with the second end of the piston being in connection with the intermediate part, the intermediate part being the element transmitting the movement of the piston to the upper support of the resilient element, the resilient element in connection therewith being movable because of the movement of the piston, with the movement restrictor being a part of the first circuit;

the resilient element, the upper support of the resilient element and the lower support of the resilient element belonging to the second part of the circuit,

and the apparatus additionally comprising insulator parts, which together
5 with the intermediate part insulate the said circuits from each other and other structures.

6. An apparatus according to claim 5, characterized in that the resilient element is a coil spring and the movement restrictor is a tap comprising a body and a base, with the body being located inside the coil spring and the base of
10 the tap being located outside the coil spring, to which base the first conductor is connected.

7. An apparatus according to claim 5, characterized in that the resilient element is a coil spring and the movement restrictor consists of a tap-like extension in the upper support, being located inside the coil spring,
15 and a base being located outside the coil spring on the other side of the lower support in relation to the spring, to which base the first conductor is connected.

8. An apparatus according to claim 5, 6 or 7, characterized in that the apparatus comprises a body structure, into which is arranged a first volume for the
20 piston, a second volume for the intermediate part and the second end of the piston, a third volume for the resilient element and the upper and lower supports of the resilient element, the movement restrictor and the insulator parts and a fourth and fifth volume for the said conductors.

9. An apparatus according to claim 6 and 8 or 7 and 8, characterized in that
25 the insulator parts comprise a plate located between the base of the movement restrictor and the body structure, and a ring located between the base of the movement restrictor and the lower support of the resilient element, to which support the second conductor is connected.

10. An apparatus according to claim 9, characterized in that the insulator
30 parts and the intermediate part are of ceramic material.

11. An apparatus according to any of claims 8 - 10, **characterized** in that the clearance between the piston and the first volume is very small, which prevents leakage from the pressurised volume.

5 12. An apparatus according to any of claims 8 - 11, **characterized** in that the body structure comprises a sixth volume being in connection with the third volume, thus forming a leakage channel for the material, if any, that has leaked out from the volume under pressure.

10 13. An apparatus according to any of claims 8 - 12, **characterized** in that the body structure is integral with the structure surrounding it or a separate construction connected to the surrounding structure.